

L4           STRUCTURE UPLOADED

=> s l4 sss full

FULL SEARCH INITIATED 16:52:33

FULL SCREEN SEARCH COMPLETED -       426 TO ITERATE

100.0% PROCESSED       426 ITERATIONS

28 ANSWERS

SEARCH TIME: 00.00.02

L5           28 SEA SSS FUL L4

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

140.28

337.69

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

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FILE 'CAPLUS' ENTERED AT 16:52:59 ON 20 AUG 2002

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FILE COVERS 1907 - 20 Aug 2002 VOL 137 ISS 8

FILE LAST UPDATED: 19 Aug 2002 (20020819/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> s l5

L6           12 L5

=> d hitstr ibib abs 1-12

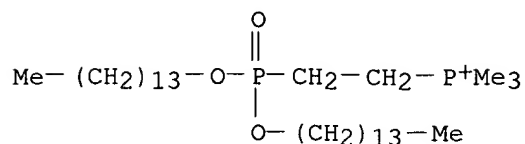
L6   ANSWER 1 OF 12   CAPLUS   COPYRIGHT 2002 ACS

IT   **263765-27-1P 321883-06-1P 321883-08-3P**

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses) (novel lipophilic compds. having affinity with nucleic acids and therapeutical uses thereof)

RN   263765-27-1   CAPLUS

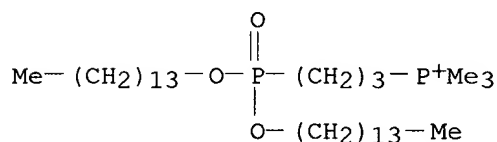
CN Phosphonium, [2-[bis(tetradecyloxy)phosphinyl]ethyl]trimethyl-, iodide  
(9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 321883-06-1 CAPLUS

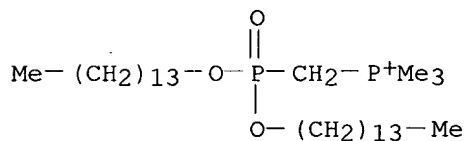
CN Phosphonium, [3-[bis(tetradecyloxy)phosphinyl]propyl]trimethyl-, iodide  
(9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 321883-08-3 CAPLUS

CN Phosphonium, [[bis(tetradecyloxy)phosphinyl]methyl]trimethyl-, iodide  
(9CI) (CA INDEX NAME)



● I<sup>-</sup>

ACCESSION NUMBER: 2001:936089 CAPLUS

DOCUMENT NUMBER: 136:74570

TITLE: Novel lipophilic compounds having affinity with  
nucleic acids and therapeutical uses thereof

INVENTOR(S): Yaouanc, Jean-Jacques; Guenin, Erwann; Clement,  
Jean-Claude; Herve, Anne-Cecile; Ferec, Claude; Floch,  
Virginie; Des Abbayes, Herve

PATENT ASSIGNEE(S): Fr.

SOURCE: U.S. Pat. Appl. Publ., 21 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001056074	A1	20011227	US 2001-754814	20010104

PRIORITY APPLN. INFO.: US 2000-175342P P 20000110

OTHER SOURCE(S): MARPAT 136:74570

AB The invention consists of a compd. of the general formula R1R2R3A+R4, X-, wherein A, R1, R2, R3, R4 and X are as disclosed in the specification. The invention also relates to the therapeutical uses of this compd., particularly for gene therapy.

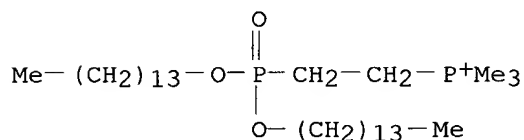
L6 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2002 ACS

IT 263765-27-1P 321883-06-1P 321883-07-2P  
 321883-08-3P 321883-09-4P 321883-10-7P  
 321883-11-8P 321883-12-9P 321883-13-0P  
 321883-14-1P 321883-15-2P

RL: ADV (Adverse effect, including toxicity); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)  
 (gene delivery by cationic phosphonolipids: effect of structure on transfection)

RN 263765-27-1 CAPLUS

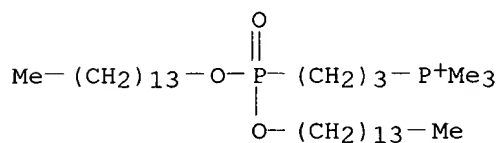
CN Phosphonium, [2-[bis(tetradecyloxy)phosphinyl]ethyl]trimethyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 321883-06-1 CAPLUS

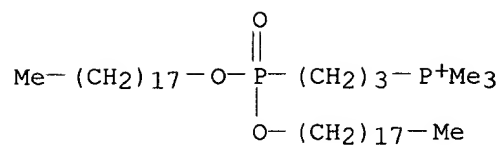
CN Phosphonium, [3-[bis(tetradecyloxy)phosphinyl]propyl]trimethyl-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

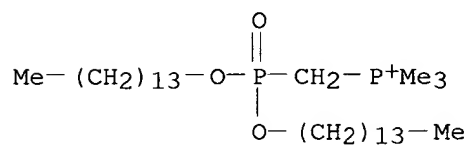
RN 321883-07-2 CAPLUS

CN Phosphonium, [3-[bis(octadecyloxy)phosphinyl]propyl]trimethyl-, iodide (9CI) (CA INDEX NAME)



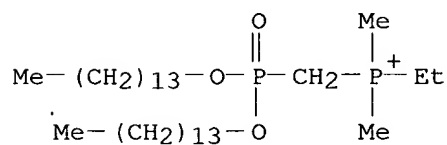
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RN 321883-08-3 CAPLUS  
CN Phosphonium, [[bis(tetradecyloxy)phosphinyl]methyl]trimethyl-, iodide  
(9CI) (CA INDEX NAME)



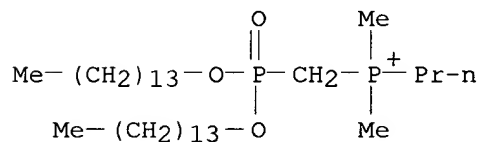
● I<sup>-</sup>

RN 321883-09-4 CAPLUS  
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(9CI) (CA INDEX NAME)



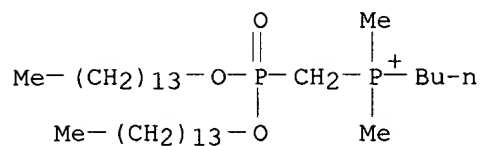
● I<sup>-</sup>

RN 321883-10-7 CAPLUS  
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(9CI) (CA INDEX NAME)



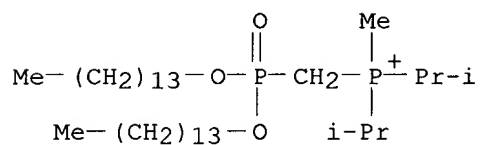
● I<sup>-</sup>

RN 321883-11-8 CAPLUS  
CN Phosphonium, [[bis(tetradecyloxy)phosphinyl]methyl]butyldimethyl-, iodide  
(9CI) (CA INDEX NAME)



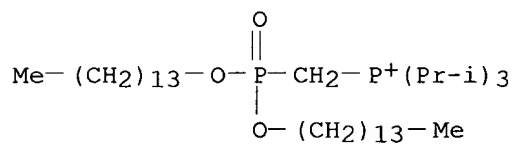
● I<sup>-</sup>

RN 321883-12-9 CAPLUS  
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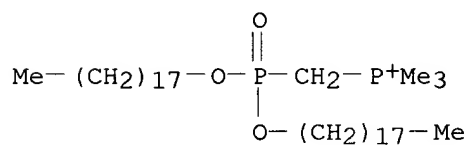
● I<sup>-</sup>

RN 321883-13-0 CAPLUS  
CN Phosphonium, [[bis(tetradecyloxy)phosphinyl]methyl]tris(1-methylethyl)-, iodide (9CI) (CA INDEX NAME)



● I<sup>-</sup>

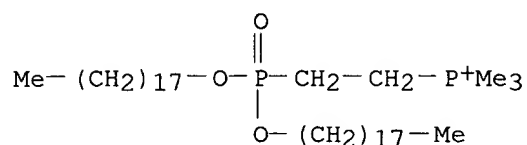
RN 321883-14-1 CAPLUS  
CN Phosphonium, [[bis(octadecyloxy)phosphinyl]methyl]trimethyl-, iodide (9CI) (CA INDEX NAME)



I<sup>-</sup>

RN 321883-15-2 CAPLUS

CN Phosphonium, [2-[bis(octadecyloxy)phosphinyl]ethyl]trimethyl-, iodide  
(9CI) (CA INDEX NAME)



● I<sup>-</sup>

ACCESSION NUMBER: 2000:783406 CAPLUS  
DOCUMENT NUMBER: 134:136543  
TITLE: Cation Substitution in Cationic Phosphonolipids: A New Concept To Improve Transfection Activity and Decrease Cellular Toxicity  
AUTHOR(S): Floch, Virginie; Loisel, Severine; Guenin, Erwann; Herve, Anne Cecile; Clement, Jean Claude; Yaouanc, Jean Jacques; des Abbayes, Herve; Ferec, Claude  
CORPORATE SOURCE: Centre de Biogenetique, CHU ETSBO, Brest, 29275, Fr.  
SOURCE: Journal of Medicinal Chemistry (2000), 43(24), 4617-4628  
CODEN: JMCMAR; ISSN: 0022-2623  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Cationic lipids have been shown to be an interesting alternative to viral vector-mediated gene delivery into in vitro and in vivo model applications. Prior studies have demonstrated that even minor structural modifications of the lipid hydrophobic domain or of the lipid polar domain result in significant changes in gene delivery efficiency. Previously, we developed a novel class of cationic lipids called cationic phosphonolipids and described the ability of these vectors to transfer DNA into different cell lines and in vivo. Up until now, in all new cationic lipids, nitrogen atoms have always carried the cationic or polycationic charge. Recently we have developed a new series of cationic phosphonolipids characterized by a cationic charge carried by a phosphorus or arsenic atom. In a second step, we have also examd. the effects of the linker length between the cation and the hydrophobic domain as regards transfection activity. Transfection activities of this library of new cationic phosphonolipids were studied in vitro in different cell lines (HeLa, CFT1, K562) and in vivo using a luciferase reporter gene. A luminescent assay was carried out to assess luciferase expression. We demonstrated that cation substitution on the polar domain of cationic phosphonolipids (N .fwdarw. P or As) results in significant increase in transfection activity for both in vitro and in vivo assays and decrease of cellular toxicity.

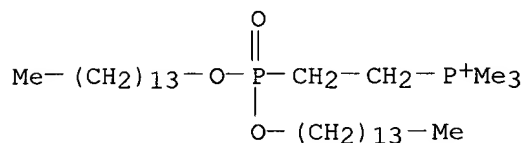
REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2002 ACS

IT 263765-27-1P 263765-30-6P

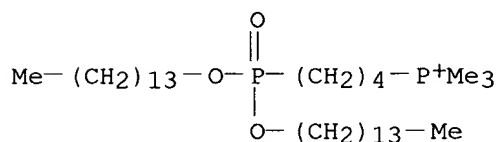
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(cationic phosphonolipids contg. quaternary phosphonium and arsonium groups for DNA transfection with good efficiency and low cellular toxicity)

RN 263765-27-1 CAPLUS  
CN Phosphonium, [2-[bis(tetradecyloxy)phosphinyl]ethyl]trimethyl-, iodide  
(9CI) (CA INDEX NAME)



● I<sup>-</sup>

RN 263765-30-6 CAPLUS  
CN Phosphonium, [4-[bis(tetradecyloxy)phosphinyl]butyl]trimethyl-, iodide  
(9CI) (CA INDEX NAME)



● I<sup>-</sup>

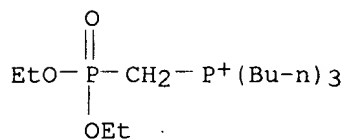
1 Feb 2000

ACCESSION NUMBER: 2000:132436 CAPLUS  
DOCUMENT NUMBER: 132:284071  
TITLE: Cationic phosphonolipids containing quaternary phosphonium and arsonium groups for DNA transfection with good efficiency and low cellular toxicity  
AUTHOR(S): Guenin, Erwann; Herve, Anne-Cecile; Floch, Virginie; Loisel, Severine; Yaouanc, Jean-Jacques; Clement, Jean-Claude; Ferec, Claude; Des Abbayes, Herve  
CORPORATE SOURCE: UMR CNRS 6521. Universite de Bretagne Occidentale, Departement de Chimie, Brest, 29285, Fr.  
SOURCE: Angewandte Chemie, International Edition (2000), 39(3), 629-631  
CODEN: ACIEF5; ISSN: 1433-7851  
PUBLISHER: Wiley-VCH Verlag GmbH  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Lipid ammonium, arsonium, and phosphonium compds. such as (C14O29O)2P(O)(CH2)nA+Me3 I- (A = N, As, and P) were prepd. Phosphonium and arsonium salts are more efficient than ammonium compds. for transfection into Hela cells. Phosphonium and arsonium compds. are less cytotoxic than the ammonium derivs.  
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT  
L6 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2002 ACS  
IT 183203-99-8P, Diethyl phosphonomethyltributylphosphonium triflate  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. of Wittig reagents and their use in prepg. .alpha.,.beta.-unsatd. phosphonates)

RN 183203-99-8 CAPLUS  
CN Phosphonium, tributyl[(diethoxyphosphinyl)methyl]-, salt with  
trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

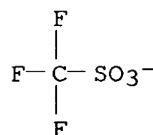
CM 1

CRN 183203-98-7  
CMF C17 H39 O3 P2



CM 2

CRN 37181-39-8  
CMF C F3 O3 S



ACCESSION NUMBER: 1999:12341 CAPLUS  
DOCUMENT NUMBER: 130:81643  
TITLE: Wittig reagents and method for preparing  
.alpha.,.beta.-unsaturated phosphonates  
INVENTOR(S): Xu, Yibo; Flavin, Michael T.  
PATENT ASSIGNEE(S): Medichem Research, Inc., USA  
SOURCE: U.S., 8 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5852198	A	19981222	US 1997-831233	19970402

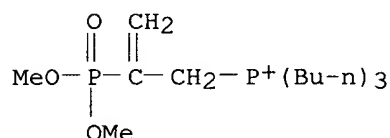
OTHER SOURCE(S): MARPAT 130:81643

AB Wittig-type reagents and methods of prepn. and use thereof for prepg.  
.alpha.,.beta.-unsatd. phosphonate esters from aldehydes and ketones are  
disclosed. The Wittig-type reagents have the following formulas:  
(R1O)2P(O)CH2P+R3 X- and (R1O)2P(O)CH:PR3 wherein X represents triflate,  
halide, BF4, SbF6, or ClO4; R1 represents alkyl, aryl or arylalkyl; and R  
represents alkyl, aryl or arylalkyl, provided that R1 and R not represent  
Ph at the same time. The Wittig reagent di-Et  
phosphonomethylidenetriphenylphosphorane (1b) was successfully synthesized  
for the 1st time via its phosphonium triflate salt (4a), by treating di-Et  
phosphonomethyl triflate with PPh3. The procedure was applied to the  
synthesis of other new Wittig-type reagents such as phosphoranes and  
phosphonium salts. The new Wittig reagents thus synthesized were treated  
with various aldehydes and an activated ketone, affording the  
corresponding .alpha.,.beta.-unsatd. phosphonates, satd. phosphonates or

phosphoric acids. Triphenylphosphorane 1b and triphenylphosphonium 4a led to both cis and trans isomers with the latter being predominant, while trans isomers were almost exclusively formed when tri-Bu reagents were used.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2002 ACS  
 IT 205243-74-9P, Tributyl(2-dimethoxyphosphinyl-2-(methylene)ethyl)phosphonium chloride  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and thermolytic conversion to betaine)  
 RN 205243-74-9 CAPLUS  
 CN Phosphonium, tributyl[2-(dimethoxyphosphinyl)-2-propenyl]-, chloride (9CI) (CA INDEX NAME)



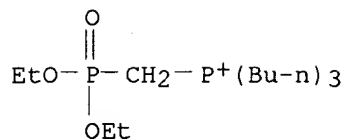
● Cl<sup>-</sup>

ACCESSION NUMBER: 1998:224959 CAPLUS  
 DOCUMENT NUMBER: 128:257508  
 TITLE: Betaine formation from dimethyl 3-phosphoniopropen-2-ylphosphonate chlorides  
 AUTHOR(S): Gurevich, I. E.; Tebby, J.; Dogadina, A. V.; Ionin, B. I.  
 CORPORATE SOURCE: Staffordshire University, Stoke-on-Trent, UK  
 SOURCE: Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (1997), 67(2), 324-325  
 CODEN: RJGCEK; ISSN: 1070-3632  
 PUBLISHER: MAIK Nauka/Interperiodica Publishing  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB (MeO)2P(O)C(CH2Cl):CH2 reacts with PBuPh2 and PBu3 to give [(MeO)2P(O)C(:CH2)CH2PR12R2]Cl (R1/R2 = Ph/Bu, Bu/Bu), which form betaines (MeO)P(O)(O-)C(:CH2)CH2PR12R2+ on heating without isomerization in CHCl3 or THF.

L6 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2002 ACS  
 IT 183203-99-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn., deprotonation, or reaction with aldehydes or ketones)  
 RN 183203-99-8 CAPLUS  
 CN Phosphonium, tributyl[(diethoxyphosphinyl)methyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

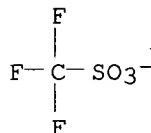
CM 1

CRN 183203-98-7  
 CMF C17 H39 O3 P2



CM 2

CRN 37181-39-8  
CMF C F3 O3 S



ACCESSION NUMBER: 1997:679095 CAPLUS  
DOCUMENT NUMBER: 127:319076  
TITLE: Wittig reagents and method for preparing  
.alpha.,.beta.-unsaturated phosphonates  
INVENTOR(S): Xu, Yibo; Flavin, Michael T.; Xu, Ze-Qi  
PATENT ASSIGNEE(S): Medichem Research, Inc., USA; Xu, Yibo; Flavin,  
Michael T.; Xu, Ze-Qi  
SOURCE: PCT Int. Appl., 25 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9736909	A1	19971009	WO 1997-US5474	19970402
<p>W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM</p> <p>RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG</p>				
AU 9724348	A1	19971022	AU 1997-24348	19970402
PRIORITY APPLN. INFO.:			US 1996-14764P	P 19960403
			WO 1997-US5474	W 19970402
OTHER SOURCE(S): CASREACT 127:319076; MARPAT 127:319076				
<p>AB The prepn. of Wittig-type reagents, (R1O)2P(O)CH2P+(R2)3X- and (R1O)2P(O)CH:P(R2)3 (X = triflate, halide, BF4, SbF6, ClO4; R1 = alkyl, aryl, arylalkyl; R2 = alkyl, aryl, arylalkyl, provided that R1 and R2 do not represent Ph at the same time), and use thereof, starting from aldehydes and ketones are disclosed. The Wittig reagent di-Et phosphonomethylidenetriphenylphosphorane has been successfully synthesized for the first time via its phosphonium triflate salt [(EtO)2P(O)CH2PPh3]+(OTf)-, by treating di-Et phosphonomethyltriflate with PPh3 according to the disclosed method. The procedure has been applied to the synthesis of other new Wittig-type reagents such as phosphoranes and phosphonium salts. The new Wittig reagents thus synthesized were treated with various aldehydes and an activated ketone,</p>				

affording the corresponding .alpha.,.beta.-unsatd. phosphonates, satd. phosphonates or phosphoric acids. Triphenylphosphorane and triphenylphosphonium led to both cis and trans isomers with the latter being predominant, while trans isomers were almost exclusively formed when tri-Bu reagents were used.

L6 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2002 ACS

IT 183203-99-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of new Wittig reagents and application to synthesis of unsatd. phosphonates)

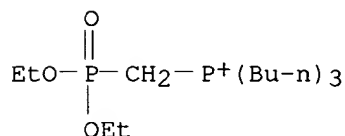
RN 183203-99-8 CAPLUS

CN Phosphonium, tributyl[(diethoxyphosphinyl)methyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 183203-98-7

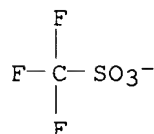
CMF C17 H39 O3 P2



CM 2

CRN 37181-39-8

CMF C F3 O3 S



ACCESSION NUMBER: 1996:618940 CAPLUS

DOCUMENT NUMBER: 125:328879

TITLE: Preparation of New Wittig Reagents and Their Application to the Synthesis of .alpha.,.beta.-Unsaturated Phosphonates

AUTHOR(S): Xu, Yibo; Flavin, Michael T.; Xu, Ze-Qi

CORPORATE SOURCE: MediChem Research Inc., Lemont, IL, 60439, USA

SOURCE: Journal of Organic Chemistry (1996), 61(22), 7697-7701  
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 125:328879

AB The Wittig reagent [(diethoxyphosphinyl)methylidene]triphenylphosphorane (1b) has been successfully synthesized for the first time via its phosphonium triflate salt (EtO)2P(O)CH2P+Ph3 OTf- (4a), by treating (diethoxyphosphinyl)methyl triflate with triphenylphosphine. The procedure has been applied to the synthesis of other phosphoranes and phosphonium salts. The new Wittig reagents thus synthesized were treated

with various aldehydes and an activated ketone, affording the corresponding .alpha.,.beta.-unsatd. phosphonates. Triphenylphosphorane 1b and triphenylphosphonium 4a led to both cis and trans isomers with the latter being predominant, while trans isomers were almost exclusively formed when tri-Bu reagents were used.

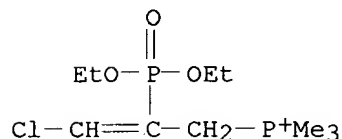
L6 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2002 ACS

IT 117740-93-9P 117740-94-0P 117740-95-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and thermal decompn. of)

RN 117740-93-9 CAPLUS

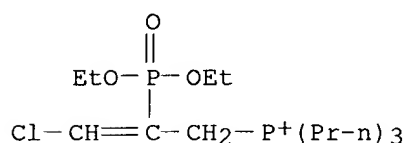
CN Phosphonium, [3-chloro-2-(diethoxyphosphinyl)-2-propenyl]trimethyl-, chloride (9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

RN 117740-94-0 CAPLUS

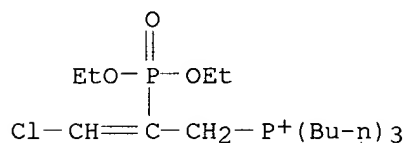
CN Phosphonium, [3-chloro-2-(diethoxyphosphinyl)-2-propenyl]tripropyl-, chloride (9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

RN 117740-95-1 CAPLUS

CN Phosphonium, tributyl[3-chloro-2-(diethoxyphosphinyl)-2-propenyl]-, chloride (9CI) (CA INDEX NAME)



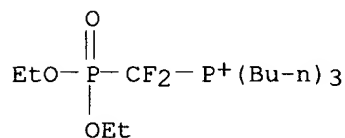
● Cl<sup>-</sup>

ACCESSION NUMBER: 1988:631163 CAPLUS

DOCUMENT NUMBER: 109:231163

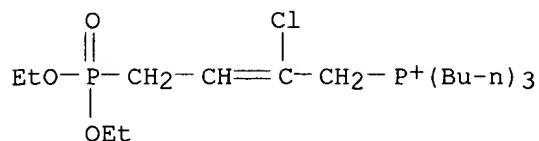
TITLE: Quaternary phosphonium salts in the vinyl phosphate series

AUTHOR(S): Gololobov, Yu. G.; Oganessian, A. S.; Petrovskii, P. V.  
 CORPORATE SOURCE: Inst. Elementoorg. Soedin. im. Nesmeyanova, Moscow, USSR  
 SOURCE: Zh. Obshch. Khim. (1988), 58(1), 225-6  
 CODEN: ZOKHA4; ISSN: 0044-460X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 109:231163  
 AB Treating (EtO)2P(O)OC(:CHCl)CH2Cl with R3P (R = Me, Pr, Bu) at 0.degree. for 2 days gave (EtO)2P(O)OC(:CHCl)CH2PR3+ Cl- (same R) quant., which gave betaines R3P+CH2C(:CHCl)OP(O)(OEt)O- on heating.  
 L6 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2002 ACS  
 IT **88410-11-1P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 88410-11-1 CAPLUS  
 CN Phosphonium, tributyl[(diethoxyphosphinyl)difluoromethyl]-, bromide (9CI) (CA INDEX NAME)



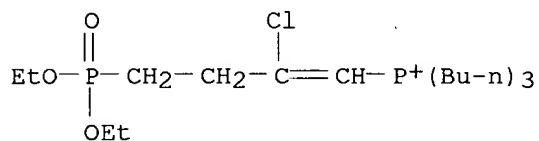
● Br<sup>-</sup>

ACCESSION NUMBER: 1984:51710 CAPLUS  
 DOCUMENT NUMBER: 100:51710  
 TITLE: Preparation and synthetic utility of fluorinated phosphonium salts, bisphosphonium salts and phosphoranium salts  
 AUTHOR(S): Burton, Donald J.  
 CORPORATE SOURCE: Dep. Chem., Univ. Iowa, Iowa City, IA, 52242, USA  
 SOURCE: J. Fluorine Chem. (1983), 23(4), 339-57  
 CODEN: JFLCAR; ISSN: 0022-1139  
 DOCUMENT TYPE: Journal  
 LANGUAGE: French  
 AB The reaction of PPh3, P(NMe2)3, and PBu3 with CF2Br2, CF2BrI, CFBr3, and CFCl3 gave rapid and high yield synthesis of various types of fluorinated phosphonium salts, bisphosphonium salts and phosphoranium salts. These salts are useful precursors to fluorine-contg. ylides, carbenes and methide ions, and were used to prep. 1,1-dihaloalkenes from ketones or aldehydes. The prepn., mechanism of formation, and the synthetic utility of these novel reagents were described.  
 L6 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2002 ACS  
 IT **79443-90-6P 79443-91-7P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 79443-90-6 CAPLUS  
 CN Phosphonium, tributyl[2-chloro-4-(diethoxyphosphinyl)-2-butenyl]-, bromide (9CI) (CA INDEX NAME)



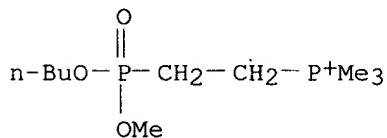
● Br<sup>-</sup>

RN 79443-91-7 CAPLUS  
 CN Phosphonium, tributyl[2-chloro-4-(diethoxyphosphinyl)-1-butenyl]-, bromide (9CI) (CA INDEX NAME)

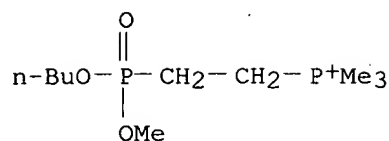


● Br<sup>-</sup>

ACCESSION NUMBER: 1981:569300 CAPLUS  
 DOCUMENT NUMBER: 95:169300  
 TITLE: Reactions of phosphonium salts and phosphonate obtained from 1,4-dibromo-2-chloro-2-butene  
 AUTHOR(S): Lulukyan, R. K.; Ovakimyan, M. Zh.; Panosyan, G. A.; Indzhikyan, M. G.  
 CORPORATE SOURCE: Inst. Org. Khim., Yerevan, USSR  
 SOURCE: Arm. Khim. Zh. (1981), 34(6), 474-9  
 CODEN: AYKZAN; ISSN: 0515-9628  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB Mono- and diphosphonium salts with a Cl atom at the .gamma.-position [e.g., R<sub>3</sub>P+CH<sub>2</sub>CH:CClCH<sub>2</sub>R<sub>1</sub> Br<sup>-</sup> (R = Ph, Bu; R<sub>1</sub> = Br, PR<sub>3</sub>+ Br<sup>-</sup>)] and (EtO)<sub>2</sub>P(O)CH<sub>2</sub>CH:CClCH<sub>2</sub>Br were prepd. by appropriate reactions of BrCH<sub>2</sub>CH:CClCH<sub>2</sub>Br, and their nucleophilic substitutions with phosphines and amines were investigated.  
 L6 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2002 ACS  
 IT 54580-38-0P 54580-42-6P 54580-59-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 54580-38-0 CAPLUS  
 CN Phosphonium, [2-(butoxymethoxyphosphinyl)ethyl]trimethyl-, bromide (9CI) (CA INDEX NAME)

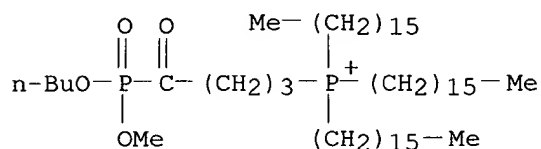


Br<sup>-</sup>



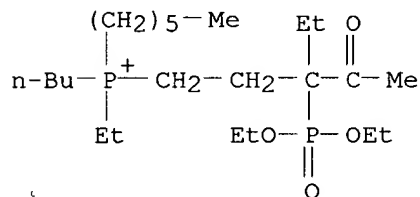
● Br<sup>-</sup>

RN 54580-42-6 CAPLUS  
CN Phosphonium, [4-(butoxymethoxyphosphinyl)-4-oxobutyl]trihexadecyl-,  
bromide (9CI) (CA INDEX NAME)



● Br<sup>-</sup>

RN 54580-59-5 CAPLUS  
CN Phosphonium, butyl[3-(diethoxyphosphinyl)-3-ethyl-4-oxopentyl]ethylhexyl-,  
chloride (9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

ACCESSION NUMBER: 1975:31392 CAPLUS  
DOCUMENT NUMBER: 82:31392  
TITLE: Organophosphonium salts  
INVENTOR(S): Grayson, Martin; Keough, Patricia T.  
PATENT ASSIGNEE(S): American Cyanamid Co.  
SOURCE: U.S., 9 pp. Division of U.S. 3,689,601 (CA  
77;152346v).  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3836587	A	19740917	US 1972-255770	19720522

US 3689601 A 19720905 US 1969-871628 19691117  
 PRIORITY APPLN. INFO.: US 1963-292123 19630701  
 US 1967-674107 19671010  
 US 1969-871628 19691117

AB The reaction of R3P with XCH2CH2OH gave .apprx.20 R3P+CH2CH2OH X- [R = Me, Et, Bu, Ph, cyclohexyl, p-tolyl, Me(CH2)15, etc.; X = Cl, Br, iodo], which were esterified and(or) dehydrated to give CH2:CHP+R3 X-. These vinyl phosphonium salts condensed with compds. such as Me2CO, CH2CO2Me, cyclohexanone, indene, MeNO2, Ph2PHO, etc., to give phosphinoethyl derivs.

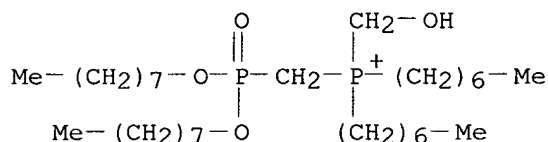
L6 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2002 ACS

IT **23685-59-8P 23685-60-1P 23756-92-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 23685-59-8 CAPLUS

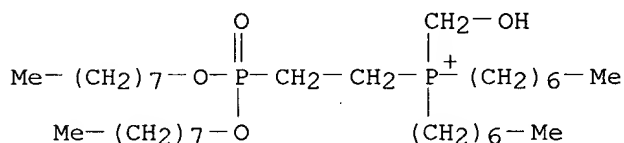
CN Phosphonium, diheptyl(hydroxymethyl)(phosphonomethyl)-, chloride, dioctyl ester (8CI) (CA INDEX NAME)



● Cl<sup>-</sup>

RN 23685-60-1 CAPLUS

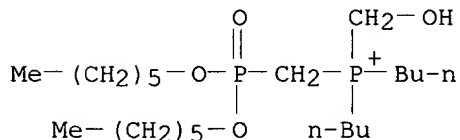
CN Phosphonium, diheptyl(hydroxymethyl)(2-phosphonoethyl)-, chloride, dioctyl ester (8CI) (CA INDEX NAME)



● Cl<sup>-</sup>

RN 23756-92-5 CAPLUS

CN Phosphonium, dibutyl(hydroxymethyl)(phosphonomethyl)-, chloride, dihexyl ester (8CI) (CA INDEX NAME)



Cl<sup>-</sup>

ACCESSION NUMBER: 1969:470693 CAPLUS  
DOCUMENT NUMBER: 71:70693  
TITLE: Preparation of dialkylethoxycarbonylmethylphosphines  
and phosphine oxides  
AUTHOR(S): Petrov, K. A.; Parshina, V. A.; Petrova, G. M.  
CORPORATE SOURCE: USSR  
SOURCE: Zh. Obshch. Khim. (1969), 39(6), 1247-51  
CODEN: ZOKHA4  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

AB Heating an equimolar mixt. of  $R_2PCH_2OH$  and  $XCH_2CO_2Et$  or its analogs, where  $X = Cl$  or  $Br$ , in an inert atm. at up to 130.degree., finally in vacuo, several hrs. gave the following  $R_2R_1PCH_2OH+X-$  ( $R$ ,  $R_1$ ,  $X$ , and  $n_{20D}$  given):  
 $Bu$ ,  $CH_2CO_2Et$ ,  $Cl$ , 1.5020;  $Bu$ ,  $CH_2CO_2Et$ ,  $Br$  ( $I$ ), 1.5010;  $Bu$ ,  $CH_2P(O)Bu_2$ ,  $Cl$ , 1.4850;  $Bu$ ,  $CH_2P(O)(OC_6H_{13})_2$ ,  $Cl$ , 1.4696;  $C_7H_{15}$ ,  $CH_2CO_2Et$ ,  $Br$ , 1.4964;  $C_7H_{15}$ ,  $CH_2P(O)(OC_8H_{17})_2$ ,  $Cl$ , 1.4771; and  $C_7H_{15}$ ,  $CH_2CH_2P(O)(OC_8H_{17})_2$ ,  $Cl$ , 1.4855. The products were purified with activated  $C$ . Treating  $I$  4 hrs. at 80.degree. with  $Et_3N$  gave 26%  $Bu_2PCH_2CO_2Et$ ,  $b_{0.02-0.03}$  150-60.degree. (bath),  $n_{21.5D}$  1.4625, insol. in  $Et_2O$ . Similarly was prepd. the diheptyl analog,  $n_{18.5D}$  1.4650; similar reaction with  $N_2H_4$  gave  $(Bu_2PCH_2CONH)_2$ , an oil. Oxidn. of the above phosphines with 10%  $H_2O_2$  gave the oxides:  $Bu_2P(O)CH_2CO_2Et$ ,  $b_{0.02-0.03}$  105-7.degree.; diheptyl analog,  $b_{0.02-0.03}$  112.degree.,  $n_{21.5D}$  1.4620.  $ClCH_2POCl_2$  (41.9 g.) added to 78.5 g.  $C_8H_{17}OH$  and 40 ml. pyridine in  $C_6H_6$  gave after 3 hrs. heating 50.5%  $ClCH_2P(O)(OC_8H_{17})_2$ ,  $b_2$  185-8.degree.,  $n_{17D}$  1.4511. Similarly was prepd. the 2-chloroethylphosphonate analog,  $b_1$  182-5.degree.,  $n_{22D}$  1.4480. Ir spectral data were given.

=>

L Number	Hits	Search Text	DB	Time stamp
1	0	cationic and phosphonium and phosphonolipid	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:45
2	1	cationic and phosphonolipid	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:45
3	0	phosphonium and phosphonolipid	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:50
4	6715	phosphonium and cationic	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:46
5	406	( phosphonium and cationic) and lipid	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:46
6	406	(( phosphonium and cationic) and lipid) and phosphon\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:46
7	115	(( ( phosphonium and cationic) and lipid) and phosphon\$) and dna	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:46
8	49	(( ( ( phosphonium and cationic) and lipid) and phosphon\$) and dna) and quatern\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:47
9	7	dna and phosphonolipid	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:50
-	0	yaouanac-\$.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:42
-	5	yaouanc-\$.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 13:02
-	3	Petrov-\$.in. and phosphine	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:09
-	1	1984-224528.NRAN.	DERWENT	2002/08/20 16:33
-	9	"5674908"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:34
-	2	"5852198"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/08/20 17:34

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L3 FILE 'CAPLUS' ENTERED AT 16:39:58 ON 20 AUG 2002  
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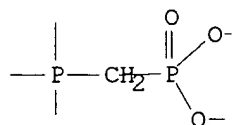
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12 S L5

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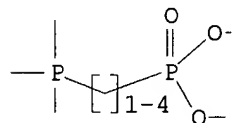
L1 STR



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=> d l4 que

L4 STR



Structure attributes must be viewed using STN Express query preparation.

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